

IX.—*List of Birds collected in Argentina, Paraguay, Bolivia, and Southern Brazil, with Field-notes.* By CLAUDE H. B. GRANT, M.B.O.U.—Part II. PICARIDÆ—ANATIDÆ\*.

Fam. TROCHILIDÆ.

136. HELIOMASTER FURCIFER.

*Heliomaster furcifer* Salv. Cat. B. xvi. p. 119.

a. ♂ ad. Puerto Asir, Paraguay. Aug. 27, 1909.

Irides hazel; bill, legs and toes black.

137. POLYTMUS THAUMANTIAS.

*Polytmus thaumantias* Salv. Cat. B. xvi. p. 174.

a. ♂ ad. Puerto Asir, Paraguay. Aug. 27, 1909.

b, c. ♂ ♀ ad. Opposite Rabicho, Brazil. Oct. 10, 1909.

d. ♂ ad. Ten miles below Boca de Homiguera, Brazil. Oct. 12, 1909.

♂. Irides brown; bill dark red, black at base and along cutting-edge; legs and toes sooty.

♀. Irides brown; bill, legs and toes dark brown.

138. CHRYSURONIA RUFICOLLIS.

*Chrysuronia ruficollis* Arg. Orn. ii. p. 8; Salv. Cat. B. xvi. p. 251.

a. ♂ ad. Los Ynglases, Ajó. Sept. 26, 1908.

b. ♂ ad. „ „ Jan. 5, 1909.

c, d. ♂ ♀ ad. „ „ Apr. 17, 1909.

e. ♀ ad. „ „ May 5, 1909.

Irides dark brown; basal half of bill flesh-coloured.

f, g. ♂ ♀ ad. Puerto Asir, Paraguay. Aug. 27, 1909.

h. ♀ ad. Brazil, opposite Puerto Medanos. Oct. 22, 1909.

i. ♀ young. Curuzu Chica, Paraguay. Oct. 29, 1909.

The August birds are much worn and moulting slightly, while the September and October examples are almost in full plumage.

\* Continued from p. 137. The arrangement and nomenclature are nearly those of Sclater and Hudson's 'Argentine Ornithology' (as in Part I).

The young bird is slightly duller than the adults, especially on the head, and the inner secondaries are tipped with dark buff. The base of the bill is not flesh-coloured.

The Bronze Humming-bird appears to be a winter visitor to the Ajó district, as it is absent during October, November, and December, and does not breed there.

When I first arrived I was told by residents that the Glittering Humming-bird often remained throughout the year; but there is no doubt than this species had been confounded with it.

Miss Runnacles "observed it in every month throughout the winter of 1909," and it disappeared soon after I arrived.

### 139. CHLOROSTILBON SPLENDIDUS.

*Chlorostilbon splendidus* Arg. Orn. ii. p. 9; Salv. Cat. B. xvi. p. 49.

- a. ♂ ad. Los Ynglases, Ajó. Sept. 27, 1908.
- b. ♂ ad. " " Oct. 28, 1908.
- c, d. ♀ ad. " " Nov. 9-17, 1908.
- e. ♀ young. " " Dec. 14, 1908.
- f, g, h. ♂ ♀ ad. " " Jan. 6-28, 1909.
- i. ♀ young. " " Apr. 17, 1909.
- j. ♂ ad. Arjerichi, Paraguay. Aug. 9, 1909.
- k. ♂ ad. Villa Franca, Paraguay. Aug. 10, 1909.
- l. ♂ ad. Near Santa Elena, N. Argentina. Nov. 15, 1909.

Irides dark brown; bill tomato-red, tip black; legs and toes black. In the female the base of the bill is not quite so bright.

The young female differs from the adult in being rather duller above, while the feathers have a more "woolly" appearance; most of the feathers, especially on the rump and nape, are edged with rufous, and they lack the colour at the base of the bill.

One of the specimens is green above and the other bronzy green.

The Glittering Humming-bird made its first appearance at Los Ynglases on Sept. 10th.

The nest is always placed in the lower branches of a coronillo tree facing the east, except when built under a veranda or summer-house near habitations.

I have the following note from Miss Runnacles :—

“One nest that was suspended from a wire under the eaves of the house was commenced in the early part of November, and when half finished the birds deserted it. After a month the pair returned and nearly completed the nest, when it was again left, and, finally, at the end of December they once more returned, completed the building, laid eggs, and brought off the young. They are very fond of human habitations and are often seen hovering round the windows catching insects, and if flowers are in the room they will come in through the windows and doors.”

The nest is sometimes suspended, sometimes attached to the branch; it is deep, cup-shaped, and composed of lichen and cobwebs lined with thistle-down, while two eggs are the full clutch.

Eight eggs brought home were taken at Ajó between November 12th and January 18th. They measure: axis 0·5 to 0·53 inch, diam. 0·33 to 0·35.

#### Fam. CAPRIMULGIDÆ.

##### 140. NYCTIDROMUS DERBIANUS.

*Nyctidromus albicollis* Hartert, Cat. B. xvi. p. 587.

*Nyctidromus albicollis derbyanus* Hellm. Nov. Zool. xii. p. 297.

*a, b.* ♂. Albuquerque, Brazil. Oct. 1, 1909.

*c.* ♂. Riacho Paraguay Mirin, Brazil. Oct. 2, 1909.

Irides brown; bill pale brown; legs and toes plum-brown.

##### 141. HYDROPSALIS FURCIFERA.

*Hydropsalis furcifera* Arg. Orn. ii. p. 15, pl. xii.; Hartert, Cat. B. xvi. p. 599.

*a.* ♂ ad. Colonia Mihanovitch, N. Argentine. Aug. 12, 1909.

142. NYCTIPROGNE LEUCOPYGIA.

*Nyctiprogne leucopygia* Hartert, Cat. B. xvi. p. 619.

*a, b.* ♂ ♀. Porto Esperança, Brazil. Sept. 25, 1909.

Irides dark grey-brown; bill, legs, and toes brown.

The female resembles the male, but is not quite fully adult; it still retains some of the wing-feathers of the young plumage broadly tipped with reddish brown.

143. PODAGER NACUNDA.

*Podager nacunda* Arg. Orn. ii. p. 12; Hartert, Cat. B. xvi. p. 619.

*a, b.* ♂ ad. Albuquerque, Brazil. Oct. 1, 1909.

Irides brown; bill brown; legs and toes whitish brown.

144. NYCTIBIUS JAMAICENSIS.

*Nyctibius jamaicensis* Hartert, Cat. B. xvi. p. 625.

*a.* ♂. Near Puerto Braga, Paraguay. Sept. 23, 1909.

Irides orange; bill dark brown, edges olive; legs and toes olive-green.

Fam. PICIDÆ.

145. COLAPTES AGRICOLA.

*Colaptes agricola* Hargitt, Cat. B. xviii. p. 25; Chubb, Ibis, 1910, p. 277 (Paraguay).

*a.* ♂ ad. Riacho Ancho, N. Argentine. Aug. 1, 1909.

Irides crimson; bill dark slate-coloured; legs and toes ash-coloured.

A good many of these Woodpeckers were seen in the open grass-country feeding on the ground; when alarmed they flew into the forest and perched on the outside branches of the trees.

146. CHLORONERPES CHRYSOCHLORUS.

*Chloronerpes chrysochlorus* Hargitt, Cat. B. xviii. p. 72.

*a.* ♀ ad. Tayru, Paraguay. Aug. 6, 1909.

Irides pale blue; bill dark slate-coloured; legs and toes green.

## 147. CHRYSOPTILUS CRISTATUS.

*Chrysoptilus melanochlorus* Hargitt, Cat. B. xviii. p. 110.

*Chrysoptilus cristatus* Chubb, Ibis, 1910, p. 279 (Paraguay).

a. ♂ ad. Alto Paraguay, Bolivia. Sept. 28, 1909.

This specimen agrees with *C. cristatus* in not having the black behind the red malar stripe; but is not quite so bright "yellowish olive" as the skin in the Museum collection; it is, however, much worn and faded.

## 148. CHRYSOPTILUS MELANOLEMUS.

*Chrysoptilus cristatus* Arg. Orn. ii. p. 21; Hargitt, Cat. B. xviii. p. 112.

a, b. ♂ ♀ ad. Los Ynglases, Ajó. Sept. 12, 1908.

c, d. ♂ ♀ ad. " " Feb. 25, 1909.

e. ♀. " " Apr. 3, 1909.

f, g, h. ♀ ad. & young. Los Ynglases, Ajó. Dec. 11-29, 1909.

i. ♀ ad. Goya, N. Argentine. Nov. 13, 1909.

♂. Irides dark plum-coloured; bill black; legs and toes olive-green.

♀. Irides brown; bill blackish; legs and toes ash-coloured.

This common species seems slightly variable, some examples being considerably brighter than others, while some have less and others more markings below.

It spends as much time on the ground as in the trees and is often seen in the open camp a considerable distance from any woods. The nesting-hole is sometimes in a post, more often in a tree; I did not succeed in securing the eggs, but there are eleven in Miss Runnacles' collection taken at Ajó between October 10th and November 8th, 1909.

## 149. CHRYSOPTILUS NIGROVIRIDIS, sp. nov.

a. ♀ ad. Mortero, Paraguay. Aug. 13, 1909.

Irides brown; bill blackish horn-coloured; legs and toes ash-coloured.

Size rather larger than either *C. melanolemus* or *C. cristatus*; above yellowish olive, not so bright as in *C. cristatus*; rump as in *C. cristatus*, but paler; a strong indication

of black behind the malar stripe, though nothing like to the extent in *C. melanolæmus*, ear-coverts washed with golden buff; below yellowish olive, the chest strongly washed with orange.

This appears to be quite a distinct form, differing from *C. melanolæmus* in having a golden-yellow rump and being greener below; and from *C. cristatus* in having an indication of black behind the malar stripe, and by the orange on the chest.

The female is similar to the male, except for the malar stripe being black speckled with yellowish white.

*Type.* ♂ ad. Rio Pilcomayo. Collected by Prof. Graham Kerr on the 14th of April, 1890.

♀ ad. Mortero, Paraguay. Collected by G. W. Tucker and C. H. B. Grant on the 13th of August, 1909.

♂. Total length 11 inches; wing 6·25; tail 3·95; culmen 1·27; tarsus 1·0.

♀. Total length 10·5 inches; wing 6·0; tail 3·9; culmen 1·3; tarsus 1·0.

I have examined three males and a female collected by Prof. Kerr and a female obtained by myself.

#### 150. MELANERPES CANDIDUS.

*Melanerpes candidus* Hargitt, Cat. B. xviii. p. 148; Chubb, Ibis, 1910, p. 280 (Paraguay).

a. ♂ ad. Sapetero Cué, Paraguay. Sept. 3, 1909.

Irides white; orbits lemon-yellow; bill dark slate-coloured, very dark at tip; legs and toes slate-coloured.

In rather worn plumage and moulting.

#### 151. DENDROCOPUS LIGNARIUS.

*Dendrocopus lignarius* Hargitt, Cat. B. xviii. p. 257.

a. ♂ ad. Near Goya, N. Argentine. Nov. 13, 1909.

b. ♂ ad. Near Santa Elena, N. Argentine. Nov. 15, 1909.

Irides red-brown; bill slaty horn-coloured; legs and toes olive-green.

Both the specimens are in rather worn plumage; one of them was observed boring a nesting-hole in the limb of a tree about ten feet from the ground.

## 152. VENILIORNIS OLIVINUS.

*Dendrobates olivinus* Hargitt, Cat. B. xviii. p. 356.

*Veniliornis olivinus* Chubb, Ibis, 1910, p. 281 (Paraguay).

a. ♂ ad. Riacho Ancho, N. Argentine. July 31, 1909.

b. ♂ ad. Arjerichi, Paraguay. Aug. 9, 1909.

c. ♂ ad. Albuquerque, Brazil. Oct. 1, 1909.

Irides brown ; bill slate-coloured, upper mandible dark ; legs and toes slate-coloured or dark ash-coloured.

## 153. CELEUS KERRI.

*Celeus kerri* Hargitt, Ibis, 1891, p. 605 (Rio Pilcomayo) ; Chubb, Ibis, 1910, p. 282 (Paraguay).

a. ♂ ad. Santa Rosa, Paraguay. Aug. 14, 1909.

b. ♂ ad. Curuzu Chica, ,, Aug. 28, 1909.

c. ♂ ad. Pan de Azucar, Brazil. Sept. 17, 1909.

Irides red or crimson ; bill white-horn-coloured ; legs and toes slate-coloured.

These birds agree well with the specimens in the British Museum, and all are much worn.

## 154. PICUMNUS PILCOMAYENSIS.

*Picumnus pilcomayensis* Hargitt, Ibis, 1891, p. 606 ; Chubb, Ibis, 1910, p. 284 (Paraguay).

a. ♂ ad. Near Santa Elena, N. Argentine. Nov. 15, 1909.

Irides hazel ; bill slate-coloured, upper mandible darker ; legs and toes slate-coloured.

## Fam. ALCEDINIDÆ.

## 155. CERYLE TORQUATA.

*Ceryle torquata* Arg. Orn. ii. p. 26 ; Sharpe, Cat. B. xvii. p. 121.

a. ♀ ad. Tayru, Paraguay. Aug. 5, 1909.

b. ♂ ad. Fuerte Olimpo, Paraguay. Oct. 21, 1909.

## 156. CERYLE AMAZONA.

*Ceryle amazona* Arg. Orn. ii. p. 27 ; Sharpe, Cat. B. xvii. p. 129.

a. ♂ ad. Tayru, Paraguay. Aug. 6, 1909.

157. *CERYLE AMERICANA.*

*Ceryle americana* Arg. Orn. ii. p. 27; Sharpe, Cat. B. xvii. p. 131.

- a. ♂ ad. Riacho Ancho, N. Argentine. July 31, 1909.
- b. ♂ ad. Sapatero Cué, Paraguay. Sept. 3, 1909.
- c. ♂ ad. Riacho Ancho, N. Argentine. Oct. 3, 1909.

Fam. TROGONIDÆ.

158. *TROGON VARIEGATUS.*

*Trogon variegatus* Ogilvie-Grant, Cat. B. xvii. p. 468; Arg. Orn. ii. p. 29.

- a. ♀ ad. Curuzu Chica, Paraguay. Aug. 28, 1909.
- b. ♂ ad. Concurencia, „ Sept. 9, 1909.
- c, d. ♂ ♀ ad. Puerto Maria, „ Sept. 13, 1909.
- e. ♂ ad. Albuquerque, Brazil. Oct. 1, 1909.

♂. Irides brown, eyelid orange; bill pearly slate-coloured; legs and toes black, powdered with white.

♀. Irides hazel; bill, upper mandible brown, lower pearly; legs and toes brown.

159. *TROGON SURUCURA.*

*Trogon surucura* Arg. Orn. ii. p. 29; Ogilvie-Grant, Cat. B. xvii. p. 471.

- a. ♂ ad. Colonia Mihanovitch, N. Argentine. Aug. 13, 1909.

Irides hazel, eyelid orange; bill blue-ash-coloured; legs and toes sooty.

Fam. CUCULIDÆ.

160. *CROTOPHAGA ANI.*

*Crotophaga ani* Arg. Orn. ii. p. 31; Shelley, Cat. B. xix. p. 429.

- a. ♂ ad. Desaguadero, Paraguay. Aug. 29, 1909.
- Irides brown; bill, legs, and toes black.

161. *CROTOPHAGA MAJOR.*

*Crotophaga major* Shelley, Cat. B. xix. p. 428.

- a. ♂ ad. Near Villa Pilar, Paraguay. Nov. 7, 1909.
- Irides pale Naples-yellow; bill, legs, and toes black.



Besides the specimen obtained, three or four individuals of this species were observed at Colonia Mihanovitch.

## 162. GUIRA PIRIRIGUA.

*Guira piririgua* Arg. Orn. ii. p. 32.

*Guira guira* Shelley, Cat. B. xix. p. 433.

a, b, c. ♂ ♀ ad. Los Ynglases, Ajó. Sept. 22, 1908.

d, e, f, g, h. ♂ ♀ ad. „ „ Apr. 5, 1909.

i, j, k. ♂ ♀ ad. „ „ May 13, 1909.

l. ♀ ad. Bella Vista, N. Argentine. Nov. 12, 1909.

The September and November birds are shewing signs of wear, and the April birds are moulting, the May specimens being in full plumage.

Irides orange; lores and orbits pale greenish yellow, bluish near the ear; bill dark orange, greenish yellow at base; legs and toes dull medium olive.

A common species, observed in parties of six or eight individuals.

## 163. DIPLOPTERUS NÆVIUS.

*Diplopterus nævius* Arg. Orn. ii. p. 35; Shelley, Cat. B. xix. p. 423.

a. ♂ ad. Cabo Emma, Paraguay. Oct. 20, 1909.

## 164. PIAYA MACRURA.

*Piaya macrura* Chubb, Ibis, 1910, p. 272.

a. ♂ ad. Tayru, Paraguay. Aug. 6, 1909.

b. ♀ ad. Pan de Azucar, Brazil. Sept. 17, 1909.

c. ♀. Boca de Homiguera, Brazil. Oct. 12, 1909.

Irides and orbits crimson; bill pale green; legs and toes slate-coloured.

The October bird is in a very pale phase, with only a wash of black on the tail.

## Fam. RHAMPHASTIDÆ.

## 165. RHAMPHASTOS TOCO.

*Rhamphastos toco* Arg. Orn. ii. p. 40; ScL. Cat. B. xix. p. 125.

a. ♂ ad. Mortero, Paraguay. Aug. 13, 1909.

b. ♂ ad. Pan de Azucar, Brazil. Sept. 19, 1909.

c, d. ♀ ad. Coimbra, Brazil. Oct. 15, 1909.

Irides dark olive-green, broad ring round eye electric blue.

More commonly observed in the palm-country, in parties of from six to ten individuals, and, as a rule, perching on the tops of the trees, where it is not difficult of approach. In flight it bears a strong resemblance to the Hornbills.

Fam. PSITTACIDÆ.

166. *CONURUS ACUTICAUDATUS*.

*Conurus acuticaudatus* Arg. Orn. ii. p. 42; Salvad. Cat. B. xx. p. 172.

a. ♂ ad. Puerto Maria, Paraguay. Sept. 13, 1909.

Irides lemon-yellow, orbits flesh-coloured; bill, lower mandible dark, upper pale horn-brown; legs and toes pale yellow-horn-coloured.

167. *CONURUS NENDAY*.

*Conurus nenday* Salvad. Cat. B. xx. p. 179.

a, b, c. ♂ ♀ ad. Bahia Negra, Paraguay. Oct. 19, 1909.

Irides deep brown; bill and orbits black; legs and toes pale flesh-coloured.

This pretty Parrot was only observed at Bahia Negra, these three having been shot from a flock of five.

168. *PYRRHURA CHIRIPEPÉ*.

*Pyrrhura vittata* Salvad. Cat. B. xx. p. 214.

*Pyrrhura chiripepé* Salvad. Boll. Mus. Tor. n. 190, pp. 1-3 (1894); id. Ibis, 1900, p. 668.

a. ♂. Puerto Maria, Paraguay. Sept. 13, 1909.

Irides brown, orbits fleshy; bill dark horn-brown; legs and toes sooty-brown.

This specimen was shot from a flock of about eight. It has an unusual amount of red and yellow on the bend of the wing, but many specimens in the Museum collection have a coloured feather or two in this region, and it is probably only due to age.

169. *MYIOPSITTACUS MONACHUS*.

*Bolborhynchus monachus* Arg. Orn. ii. p. 43.

*Myopsittacus monachus* Salvad. Cat. B. xx. p. 231.

- a.* ♂ ad. Los Ynglases, Ajó. Sept. 10, 1908.  
*b, c.* ♂ ♀ nestling. „ „ Dec. 14, 1908.  
*d, e, f.* ♂ ♀ ad. & young. „ „ Mar. 1-19, 1909.  
*g.* ♀ ad. „ „ Apr. 18, 1909.  
*h.* ♂. Santa Rosa, Paraguay. Aug. 14, 1909.  
*i.* ♀. Alto Paraguay, Bolivia. Sept. 28, 1909.  
*j, k.* ♂ ♀. Puga, Brazil. Sept. 30, 1909.

*Ad.* Irides grey-brown; bill pale horn-coloured; legs and toes sooty.

*Nestling.* Irides hazel; bill, legs and toes very pale fleshy.

The March and April birds are moulting. The August and September birds are much worn. The young bird differs from the adult only in having the blue of the wings slightly less bright, the primaries and secondaries being more distinctly tipped, and the grey forehead being washed with greenish.

The northern birds appear rather smaller than the southern specimens, and I at first thought them distinct, but there is some individual variation, and in measurements they intergrade.

So many excellent notes have been written on the habits of this common Parrot that I can add nothing.

Seven eggs are in this collection, taken at Ajó on the 14th of December, 1908, when both young and eggs were found in the same nest. They measure: axis 1.1 to 1.16 in., diam. 0.8 to 0.83.

#### 170. CHRYSOTIS ÆSTIVA.

*Chrysotis æstiva* Arg. Orn. ii. p. 47; Salvad. Cat. B. xx. p. 285.

*Amazona æstiva* Sharpe, Hand-l. ii. p. 20.

*a, b, c.* ♂ ♀. Pan de Azucar, Brazil. Sept. 17, 1909.

Irides orange, orbits pale yellow; bill blackish slate-coloured; legs and toes sooty-black.

The female is less bright than the male, and she and one of the males are much more worn than the third bird. All three have both red and yellow on the bend of the wing.

This species was commonly observed throughout the river expedition, usually in parties of six or eight individuals, screaming their loudest as they passed over the trees.

171. *PIONUS MAXIMILIANI.*

*Pionus maximiliani* Arg. Orn. ii. p. 217 ; Salvad. Cat. B. xx. p. 327.

a. ♂ ad. Tebicuari, Paraguay. Aug. 8, 1909.

b. ♂ ad. Santa Rosa, Paraguay. Aug. 14, 1909.

c. ♂ ad. Siete Puntas, Paraguay. Aug. 31, 1909.

Irides brown, orbit primrose-yellow ; bill dark yellow ; cere and culmen sooty ; legs and toes sooty.

All the specimens are in winter plumage, the male from Tebicuari having a strong wash of lilac on the throat-feathers and being rather bigger. The other two have only a faint trace of the lilac, and in both the base of the lower mandible is dusky.

Very few individuals of this Parrot were observed ; in flying it resembles an *Amazona*, but looks smaller and darker, and has a different call-note. It was also observed in Brazil.

Fam. STRIGIDÆ.

172. *ASIO BRACHYOTUS.*

*Asio brachyotus* Arg. Orn. ii. p. 49.

*Asio accipitrinus* Sharpe, Cat. B. ii. p. 234.

a. ♂ young. Los Ynglases, Ajó. Mar. 20, 1909.

b. ♂ ad. „ „ Jan. 23, 1910.

The March specimen is apparently young, as it is much richer in colour than the January bird.

This Owl was fairly common in all the rougher grasslands, where it was flushed from the ground, and two that I put up left the remains of a half-eaten "Tuco tuco" (*Ctenomys*) behind them. It breeds in this district, the nest being a mere flattened place under a tuft of grass. I brought home three eggs, and there is a clutch of two in Miss Runnacles' collection, taken on the 28th of January

and the 23rd of December respectively. They measure:—axis 1.5 to 1.61 in., diam. 1.29 to 1.3.

The nest was situated on the ground in a tuft of grass, and composed of a little dry grass.

173. *ASIO MEXICANUS*.

*Asio mexicanus* Sharpe, Cat. B. ii. p. 231.

*Asio clamator* Sharpe, Hand-l. i. p. 280.

a. ♂ ad. Pasage de Bugre, Brazil. Sept. 29, 1909.

Irides brown; bill and nails dull black.

This is a rather paler specimen than the majority in the British Museum; it is rather worn, and perhaps a good deal faded.

174. *SPEOTYTO CUNICULARIA*.

*Speotyto cunicularia* Sharpe, Cat. B. ii. p. 142; Arg. Orn. ii. p. 52.

a, b. ♂ ♀ ad. Los Ynglases, Ajó. Sept. 29, 1908.

c, d, e, f. ♀ ad. „ „ Oct. 21–22, 1908.

g. ♀ ad. „ „ Nov. 1, 1908.

h. ♂ ad. „ „ Jan. 8, 1909.

i, j. ♀ ad. „ „ Feb. 1, 1909.

Irides clear pale yellow; bill pale green.

The January and February birds are moulting, the old feathers being much worn. Both the males are whiter below and less marked than the females.

This bird was exceedingly plentiful in the Ajó district, and was very tame. The excellent notes on its habits given by Hudson need no further additions.

The nesting-hole is usually made in sandy soil and is about three or four feet long: it is sometimes curved, more often straight, and never far below the surface of the ground, the end of the burrow being circular. Five or six eggs constitute the clutch. Most of the females secured were caught on the eggs, and offered no resistance when captured.

Thirty-nine eggs were brought home, taken at Ajó between October 22nd and November 1st, 1909, and measuring: axis 1.35 to 1.5 in., diam. 1.05 to 1.15.

Fam. FALCONIDÆ.

175. CIRCUS CINEREUS.

*Circus cinereus* Sharpe, Cat. B. i. p. 56; Arg. Orn. ii. p. 57.

a. ♂ ad. Los Ynglases, Ajó. Sept. 26, 1908.

b. ♂ ad. „ „ June 9, 1909.

Irides yellow; eyelids yellow; cere greenish yellow; bill slate-coloured; legs and toes bright lemon-yellow.

Both these examples are in full plumage; the June bird having a few brownish-edged feathers on the nape, but otherwise being like the September specimen.

This species is resident in the Ajó district, but by no means so plentiful as *C. maculosus*.

176. CIRCUS MACULOSUS.

*Circus macropterus* Arg. Orn. ii. p. 58; Holland, Ibis, 1897, p. 162.

*Circus maculosus* Sharpe, Cat. B. i. p. 62.

a. ♂. Luiconia, Ajó. Jan. 31, 1909.

b, c. ♀. Los Ynglases, Ajó. Feb. 14, Mar. 16, 1909.

d. ♂ ad. Luiconia, Ajó. April 29, 1909.

e, f. ♂ ♀ ad. Los Ynglases. May 13, 24, 1909.

g. ♀ ad. Alto Paraguay, Bolivia. Oct. 15, 1909.

The January and April birds are moulting. The March bird has the whole under parts suffused with deep buff, with streaks and narrow spots of black on the breast, and brown spots on the belly, thighs, and under tail-coverts.

177. ASTURINA PUCHERANI.

*Asturina pucherani* Sharpe, Cat. B. i. p. 205; Arg. Orn. ii. p. 58.

*Rufornis pucherani* Sharpe, Hand-l. i. p. 257 (1899).

a. ♀ ad. Riacho Ancho, N. Argentine. Aug. 1, 1909.

b. ♂ imm. Colonia Mihanovitch, N. Argentine. Aug. 11, 1909.

c, d. ♂ ♀ ad. & imm. Ten miles above Villa Pilar, Paraguay. Aug. 7, 1909.

Ad. ♀. Irides yellow, cere and orbits yellow; bill slaty, black at tip; legs and toes lemon-yellow.

*Imm.* ♂. Irides and cere lemon-yellow, orbits greener; bill slate-coloured, darker at tip; legs and toes lemon-yellow.

These birds agree with the remarks made by Mr. Chubb on the plumages of this Hawk, except that the adult female shot on Aug. 7th has five bars to the tail and an indication of a sixth.

Commonly observed throughout the river expedition, sitting both on the trees and on the banks.

178. *ASTURINA NITIDA.*

*Asturina nitida* Sharpe, Cat. B. i. p. 203.

a. ♂ ad. Puerto Maria, Paraguay. Oct 24, 1909.

Irides brown, orbits fleshy, cere and gape lemon-yellow; bill black, inclining to slate-coloured at base; legs and toes dull lemon-coloured, nails black.

179. *BUTEO SWAINSONI.*

*Buteo obsoletus* (nec Gm.), Sharpe, Cat. B. i. p. 184.

*Buteo swainsoni* Arg. Orn. ii. p. 59; Sharpe, Hand-l. i. p. 256.

a. ♂ young. Luiconia, Ajó. Nov. 14, 1908.

b. ♂ young. Los Ynglases, Ajó. Dec. 9, 1909.

One of these two males is more thickly marked on the breast than the other.

180. *URUBITINGA ZONURA.*

*Urubitinga zonura* Sharpe, Cat. B. i. p. 213.

*Urubitinga urubitinga* Sharpe, Hand-l. i. p. 258.

a. ♀. Tayru, Paraguay. Aug. 5, 1909.

b. ♀. Villa Pilar, Paraguay. Aug. 6, 1909.

181. *BUSARELLUS NIGRICOLLIS.*

*Busarellus nigricollis* Sharpe, Cat. B. i. p. 211.

a. ♀. Riacho Ancho, N. Argentine. Aug. 1, 1909.

b. ♀. Near Villa Franca, Paraguay. Nov. 6, 1909.

Irides brown; bill black; orbits and gape slate-coloured; legs and toes bluish white.

The female from Riacho Ancho is obviously younger than the other, as it has the chest-feathers broadly centred with

blackish, and the feathers of the belly and thighs, especially the latter, barred with the same colour, as also is the rump.

This bird was always observed sitting in the trees overhanging water, though I never saw it catch anything.

182. GERANOAËTUS MELANOLEUCUS.

*Buteo melanoleucus* Sharpe, Cat. B. i. p. 168.

*Geranoaëtus melanoleucus* Arg. Orn. ii. p. 64.

a, b. ♂ ♀ ad. & imm. Los Ynglases, Ajó. Sept. 15, 1908.

c. ♀. Los Ynglases, Ajó. Feb. 25, 1909.

Quite an uncommon visitor to the Ajó district and usually frequenting the tall eucalyptus trees.

183. GERANOSPIZIAS CÆRULESCENS.

*Geranospizias cærulescens* Sharpe, Cat. B. i. p. 81; Arg. Orn. ii. p. 67.

a. ♀ ad. Riacho Ancho, N. Argentine. Aug. 1, 1909.

Irides yellow; bill black, slaty at base of both mandibles; legs and toes orange.

184. FALCO PEREGRINUS.

*Falco communis* Sharpe, Cat. B. i. p. 384.

*Falco peregrinus* Arg. Orn. ii. p. 67.

a. ♂ ad. Los Ynglases, Ajó. Dec. 20, 1909.

Irides deep brown; orbits, cere, legs, and toes bright lemon-chrome; bill dark slate-coloured at tip, greenish yellow at base.

185. FALCO FUSCO-CÆRULESCENS.

*Falco fusco-cærulescens* Sharpe, Cat. B. i. p. 400; Arg. Orn. ii. p. 69.

This Hawk is not represented in the collections made by me; but I have an adult female taken on the 27th of June, 1909, at Ajó, from Miss Runnacles' collection. This specimen is very much worn and new feathers are appearing on the nape and mantle.

186. TINNUNCULUS CINNAMOMINUS.

*Cerchneis cinnamominus* Sharpe, Cat. B. i. p. 439.

*Tinnunculus cinnamominus* Arg. Orn. ii. p. 69.



a. ♂ ad. Luiconia, Ajó. April 29, 1909.

Irides dark brown, orbits and cere pale lemon-coloured; bill pale slate-coloured, dark at tip; legs and toes rich lemon-coloured, claws black.

This specimen agrees with others in the British Museum, and tallies with the description given by Ridgway, having the tail tipped with rufous and the outer feathers unvariegated. In Miss Runnacles' collection there is a single male, also taken at Ajó, on the 15th of August, 1909, that agrees with the description by Ridgway of *C. australis*, having the tail tipped with white and the outer tail-feathers variegated.

This little Kestrel is only a winter visitant to the Ajó district; but the dates of its arrival and departure I do not know, as very few are seen. I only noticed three or four throughout the winter of 1909.

It is usually seen perched on the posts of the wire fencing or the tops of solitary trees, where it is, as a rule, easy of approach.

187. *ELANUS LEUCURUS*.

*Elanus leucurus* Sharpe, Cat. B. i. p. 339; Arg. Orn. ii. p. 71.

a. ♂ young. Los Ynglases, Ajó. Feb. 20, 1910.

Quite a rare bird in the Ajó district, and I only observed two individuals during my visits.

188. *ROSTRHAMUS SOCIABILIS*.

*Rostrhamus sociabilis* Sharpe, Cat. B. i. p. 327; Arg. Orn. ii. p. 72.

This Hawk is not represented in the collections made by me; but I have seen two young females and an adult male taken at Ajó, in the collection of Miss Runnacles.

189. *MILVAGO CHIMANGO*.

*Ibycter chimango* Sharpe, Cat. B. i. p. 41.

*Milvago chimango* Arg. Orn. ii. p. 74.

a. ♂. Los Ynglases, Ajó. Sept. 14, 1908.

b. ♀. " " Nov. 28, 1908.

c. ♂. " " Feb. 14, 1909.

d. ♂. " " Mar. 3, 1909.

The nest is placed either in the fork of a large tree or on the ground under a tuft of grass or a thistle, &c.; when in such a situation it is merely lined with a little wool or rubbish, but in trees the nest is composed of sticks and lined with grass or wool. Three eggs appears to be the complete clutch.

Ten eggs were brought home, collected between Nov. 4 and Dec. 28; they vary considerably in the arrangement of the markings, some being marked evenly all over and others having the bulk of the markings at the obtuse end.

## 190. MILVAGO CHIMACHIMA.

*Ibycter chimachima* Sharpe, Cat. B. i. p. 39.

a. ♀ ad. Puerto San Juan, Paraguay. Aug. 26, 1909.

## 191. POLYBORUS THARUS.

*Polyborus tharus* Sharpe, Cat. B. i. p. 31; Arg. Orn. ii. p. 81.

a. ♀ ad. Luiconia, Ajó. Nov. 19, 1908.

b, c, d. ♂ ♀ nestling. Luiconia. Nov. 19, 1908.

e. ♀ young. Los Ynglases, Ajó. Feb. 9, 1909.

f. ♀ young. „ „ Mar. 3, 1909.

g. ♀ ad. „ „ Mar. 20, 1909.

The adult female taken in November is in full plumage and very much worn; it was the parent of the three nestlings.

Irides brown, orbits and cere orange-chrome; bill pearly slate-coloured; legs and toes lemon-yellow, nails black.

The adult female, shot on March 20, is not really fully adult, inasmuch as the feathers of the breast are barred as in the old bird, but have broad white shaft-streaks; new feathers are appearing in this region, and these are as in the fully adult, while the hind-neck, ear-coverts, and fore-neck are more strongly tinged with rufous. This appears to point to an immature stage, intermediate between the young and fully adult bird.

I can add little to the excellent notes given by Mr. Hudson in the 'Argentine Ornithology,' except to say I have never seen one of these birds take living prey, and have always

found them feasting on the carcasses of dead stock in company with Chimangos and Gulls.

The nest is a large and often inaccessible structure of sticks, placed in a big tala or other tree, and I have heard of the bird breeding occasionally on the ground.

I did not obtain the eggs; but there is a set of three in Miss Runnacles' collection, taken at Ajó on Sept. 17, 1909; they are very dark with little of the ground-colour shewing, and measure: axis 2.42 to 2.5 in., diam. 1.79.

Fam. CATHARTIDÆ.

192. CATHARTES AURA.

*Cathartes aura* Arg. Orn. ii. p. 89.

a. ♀ ad. Tayra, Paraguay. Aug. 6, 1909.

Irides crimson; bare skin of head and neck bright yellow, rich chrome round eye, and bluish on crown and throat; bill deep flesh-coloured; legs and toes yellow, powdered with white.

Commonly observed in most localities on the river expedition, usually singly. It has a graceful easy flight, and hawks backwards and forwards after the manner of a Kite; it has a peculiar mewing call.

Fam. PHALACROCORACIDÆ.

193. PHALACROCORAX BRASILIENSIS.

*Phalacrocorax brasilianus* Arg. Orn. ii. p. 91.

*Phalacrocorax vigua* Grant, Cat. B. xxvi. p. 378.

a. ♀ ad. Tebicuari, Paraguay. Aug. 8, 1909.

b. ♀ imm. Monte Alto, „ Aug. 25, 1909.

The adult bird is moulting, and has a few scattered white feathers on the head and neck.

Irides brown, orbits and lores sooty; bill horn-coloured, yellowish at base of lower mandible; legs and toes black.

The immature bird is also moulting, except for the wings, and is everywhere assuming the dark plumage, but the new feathers of the tail are still tipped with "brownish white."

Fam. PLOTIDÆ.

194. PLOTUS ANHINGA.

*Plotus anhinga* Grant, Cat. B. xxvi. p. 419.

a. ♀ ad. Tebicuari, Paraguay. Aug. 8, 1909.

b. ♀ juv. Mortero, „ Aug. 13, 1909.

The adult is moulting on the under parts and tail.

*Ad.* Irides brown; orbit, lores, and bill pale yellowish; upper mandible horn-coloured; legs and toes dirty yellow, webs darker.

*Young.* Irides yellow; orbits and bill greenish yellow; legs and toes yellowish and sooty.

The Darter was commonly observed on the Rio Paraguay, and the further north we went the more plentiful it became; it was observed also on the Rio Paraná to the south of Corrientes; the last examples, three together on the 15th of November, were seen a few miles below La Paz, Northern Argentine.

Fam. ARDEIDÆ.

195. ARDEA COCOI.

*Ardea cocoi* Arg. Orn. ii. p. 93; Sharpe, Cat. B. xxvi. p. 72.

a. ♀ imm. Tuyu, Ajó. Feb. 12, 1909. In full moult.

Irides pale yellow; orbits and lores green, surrounded with black; bill and upper mandible black, lower pale yellow, greenish at base; legs and toes dull black, whitish on tibia.

196. ARDEA EGRETTA.

*Ardea egretta* Arg. Orn. ii. p. 98.

*Herodias egretta* Sharpe, Cat. B. xxvi. p. 95.

This species is not represented in the collections made by me, but I have an adult female in breeding-dress from the collection of Miss Runnacles, shot on November 8th, 1909, at Los Ynglases, Ajó.

Sparingly observed on the river expedition, and everywhere very wild.

## 197. ARDEA SIBILATRIX.

*Ardea sibilatrix* Arg. Orn. ii. p. 100.

*Syrigma cyanocephalum* Sharpe, Cat. B. xxvi. p. 170.

a. ♂ ad. Tebicuari, Paraguay. Aug. 17, 1909.

Irides pale bluish grey; orbits and lores electric blue; bill lilac, tip black; legs and toes black.

This species was commonly observed on the river expedition in most of the swamps, usually in pairs; and, when disturbed, perched on the outermost branches of the trees. It has a low whistling note.

## 198. BUTORIDES CYANURUS.

*Butorides cyanurus* Arg. Orn. ii. p. 101.

*Butorides striata* Sharpe, Cat. B. xxvi. p. 175; Oates, Cat. Birds' Eggs Brit. Mus. ii. p. 126.

a. ♀ ad. Rabicho, Brazil. Oct. 8, 1909.

Irides rich lemon-coloured, orbits and top of lores greenish yellow, rest of lores and adjoining gape dull sooty black; bill black, lower basal half of lower mandible greenish yellow; legs and toes ashy-yellow, lemon-yellow at tibio-tarsal joints, behind tarsi, and soles of feet.

Commonly observed on the river expedition and frequenting the bush along the banks, usually singly.

When alarmed this bird has a curious habit of raising the feathers of the head and neck, and on taking wing it utters a harsh grating cry. I did not obtain it in the Ajó district, where it is very rare, though quite a number were observed there by Miss Runnales during the summer of 1909, and I have an adult male and two adult females collected by her between October 24th and November 14th. It also bred there that year, and eight eggs are in her collection taken between November 9th and 28th.

These eggs are pale bluish green and measure: axis 1.50 to 1.55 in., diam. 1.1 to 1.19.

Miss Runnales tells me that the full clutch of eggs consists of four, and that the nest is a small platform of dry durasnillo in a cañadon.

199. ARDETTA INVOLUCRIS.

*Ardeetta involucris* Arg. Orn. ii. p. 101; Sharpe, Cat. B. xxvi. p. 235; Oates, Cat. Birds' Eggs Brit. Mus. ii. p. 132.

a. ♀ ad. Los Ynglases, Ajó. Dec. 8, 1908.

b. ♀ young. „ „ Jan. 11, 1909.

Irides pale yellow; bill yellow-ochre, culmen horn-coloured; orbits greenish yellow; legs and toes grass-green; backs of tarsi and soles of feet yellow.

The young bird differs from the adult in having the sides of the head and neck washed with deeper brown; the striping of the back narrower with more golden-buffy edgings; the "chestnut" of the wing-coverts and bastard wing more vandyke-brown; the primaries and secondaries distinctly tipped with dusky, the innermost with the chestnut restricted along the shaft, the rest of the feathers being dusky, with the outer web edged with golden buff.

This species is common in the reed-beds in the Ajó district, but very difficult to shoot, as it seldom takes to flight. When alarmed it runs and climbs among the reeds with extraordinary agility, and its colour lends itself so well to the dry and brown reeds that it is soon lost to sight. It breeds in the Ajó district, and there are two eggs in Miss Runnacles' collection from a clutch of three. These are of a clear pea-green, and measure: axis 1.36 and 1.39 in., diam. 2.01 and 2.0.

The nest was a small platform of dry sticks in a cañadon.

200. TIGRISOMA MARMORATUM.

*Tigrisoma marmoratum* Arg. Orn. ii. p. 104; Sharpe, Cat. B. xxvi. p. 195.

a. ♂ ad. Alto Paraguay, Bolivia. Sept. 28, 1909.

Irides lemon-yellow; bill, upper mandible dark purple-brown extending to the lores in two streaks, one to the eye and the other below the eye, the rest of the lores and orbits being lemon-yellow, as likewise are the bare cheeks; lower mandible dark purple-brown, fleshy along lower edge; bare skin of chin and sides of throat pale greenish lemon-yellow; legs and toes dark sepia-brown.

## 201. NYCTICORAX TAYAZU-GUIRA.

*Nycticorax obscurus* Arg. Orn. ii. p. 105.

*Nycticorax tayazu-guira* Sharpe, Cat. B. xxvi. p. 155.

This Night-Heron is not represented in the collection made by me; but there is an adult male in the collection of Miss Runnacles taken at Los Ynglases, Ajó, on the 17th October, 1909. I saw very few Night-Herons in the Ajó district, owing principally to the drought; they frequent the densest reed-beds, and on being disturbed utter a hoarse cry of "gua-gua." The bird is locally known as the "Perro de Agua" (water-dog), I presume from its cry.

It is very common on the Rio Paraná and Rio Paraguay, frequenting the thick bush along the river-banks.

## 202. CANCROMA COCHLEARIA.

*Cancroma cochlearia* Sharpe, Cat. B. xxvi. p. 163.

*a, b.* ♂ ad. Pasage de Bugre, Brazil. Sept. 29, 1909.

Irides dark brown, eyelids sooty-black above, greenish yellow below; bill, upper mandible black-horn-coloured, depression of nostril and cutting-edge dull yellow; lower dull yellow, black at base, skin below dull yellow; lores sooty; legs and toes dull yellow.

Both specimens are moulting slightly, and neither has the nuchal crest very long.

## Fam. CICONIIDÆ.

## 203. EUXENURA MAGUARI.

*Euxenura maguari* Arg. Orn. ii. p. 106; Sharpe, Cat. B. xxvi. p. 297.

*a.* ♀ young. Luiconia, Ajó. Jan. 29, 1909.

*b.* ♀ ad. Tuyu, „ Feb. 12, 1909.

*c, d.* ♂ ad. Los Ynglases, Ajó. Mar. 16, 1909.

*e.* ♀ ad. Tebicuari, Paraguay. Aug. 7, 1909.

The young bird is moulting and assuming the adult plumage. The adults taken in February and March are moulting slightly.

Irides brown; lores sooty; bill black with lighter patches of horn-colour, chin dull orange; legs and toes dull purplish brown.

This species was commonly observed in all the localities visited ; it is resident and breeds in the Ajó district, where it frequents both the swamps and open camp singly or in pairs, and feeds largely upon frogs, toads, lizards, and eels. I did not succeed in obtaining the eggs ; but a set of five are in the collection of Miss Runnacles, taken on the 26th of October, 1909, at Ajó. These measure : axis 2·95 to 3·0 in., diam. 2·0 to 2·09.

The nest was in a deep cañadon, about three feet high ; it was made of sticks and dry hunco.

204. TANTALUS LOCULATOR.

*Tantalus loculator* Arg. Orn. ii. p. 108 ; Sharpe, Cat. B. xxvi. p. 321.

a. ♀ ad. Los Ynglases, Ajó. Mar. 11, 1909.

Irides dark brown ; bill dark bluish horn-coloured, vertex slightly red ; bare skin of head and neck black with white scales ; legs blue-slate-coloured ; feet whitish flesh-coloured.

Fam. PLATALEIDÆ.

205. PLEGADIS GUARAUNA.

*Plegadis guaraua* Sharpe, Cat. B. xxvi. p. 34 ; Arg. Orn. ii. p. 109.

a. ♀ ad. Los Ynglases, Ajó. Sept. 21, 1908.

b. ♀ ad. „ „ Feb. 24, 1909.

c, d, e. ♂ young. „ „ Jan. 25, 1909.

f. ♀ ad. „ „ April 23, 1909.

g. ♀ ad. „ „ Jan. 18, 1910.

h. ♂ imm. Tebicuari, Paraguay. Aug. 8, 1909.

The adult in September is in breeding-dress.

Irides rich red ; orbits, lores, and throat crimson ; bill ashy ; legs and toes dark purple, dull crimson at joints.

The adults taken in January, February, and April are all assuming the winter-dress, the under parts apparently changing to the colour of the following specimen.

Irides crimson, lores and chin crimson ; bill ashy, tip reddish ; legs and toes dark purple.

This is the common Ibis of the Ajó district, and was



observed everywhere on the Rio Paraná and Rio Paraguay. In the Ajó district it apparently does not breed, and the majority disappear for a short time between September and January, the few that remain being probably immature. I was told that it breeds plentifully at Tandil to the southward, but I was unable to authenticate this.

The habits have been too well described by Hudson to need further notes.

206. PHIMOSUS INFUSCATUS.

*Phimosus infuscatus* Sharpe, Cat. B. xxvi. p. 26 ; Arg. Orn. ii. p. 113.

*a, b.* ♂ ♀ ad. Santa Rosa, Paraguay. Aug. 14, 1909.

Irides brown; bare skin on head pink-flesh-coloured; bill, legs and toes ashy brown.

Flocks of this Ibis were observed on the river expedition, and on one occasion I dropped nine with one shot.

207. AJAJA ROSEA.

*Ajaja ajaja* Sharpe, Cat. B. xxvi. p. 52.

*Ajaja rosea* Arg. Orn. ii. p. 114.

*a.* ♂ ad. Los Ynglases, Ajó. Nov. 28, 1908.

*b, c.* ♀ ad. „ „ Dec. 4, 1908.

*d.* ♂ ad. „ „ Dec. 18, 1909.

*e.* ♀ ad. Los Violetas, Monsalvo. Jan. 30, 1910.

*f.* ♀ ad. Tebicuari, Paraguay. Aug. 8, 1909.

The November bird is in full breeding-dress.

Irides red; lores and orbits yellow-ochre; bare part of head from forehead to crown pale Naples-yellow; occiput and below ear sooty-black; around orifice of ear pale Naples-yellow; skin of chin and throat admixture of pale Naples-yellow and yellow-ochre; bill clear ashy, somewhat sooty between corrugations at base; legs dull crimson-lake, feet sooty-black.

The August bird is moulting into the summer plumage, and the January one is moulting into the winter dress.

The soft parts are as above, except that there is no black on the occiput.

It has not, I think, been noticed before that the feathering

of the neck in winter is thicker and longer than in summer, being interspersed with *longish* down, while the lower throat and occiput are covered with *short* close-set down.

The December birds are in a rather curious stage of plumage; they are in full summer dress, though the upper back and breast are paler than in other specimens. The greater part of the neck is covered with *short* thick down, the whole lower neck is in moult and the new feathers are appearing in two tracts up each side of the neck, leaving the throat and a tract down the front of the neck, and the occiput and a tract halfway down the back of the neck, covered with the down. The soft parts are as in the August and January birds. The August bird shews traces of having had a somewhat similar state of feathering.

These birds are quite adult, as is shewn by the deep corrugations on the beak, and amongst the large series in the British Museum I can find no specimens that help to explain why they have donned this state of dress.

#### Fam. PHÆNICOPTERIDÆ.

##### 208. PHÆNICOPTERUS IGNIPALLIATUS.

*Phænicopterus ignipalliatu*s Arg. Orn. ii. p. 117.

a. ♂ ad. Los Ynglases, Ajó. June 12, 1909.

Irides opaque pinky white; orbits and bill opaque pinky white, apical half black; legs violet-grey, joints, toes, and webs carmine.

#### Fam. PALAMEDEIDÆ.

##### 209. CHAUNA CRISTATA.

*Chauna chavaria* Arg. Orn. ii. p. 119.

*Chauna cristata* Salvad. Cat. B. xxvii. p. 6.

a, b. ♂ ♀ ad. Los Ynglases, Ajó. Oct. 3-13, 1908.

c, d. ♂ ♀ ad. „ „ Feb. 19, 1909.

♀. Irides dark brown; orbits and cere pink-flesh-coloured; bill pale horn-coloured; legs and toes medium salmon-coloured.

♂. Irides pale brown.

Twenty eggs of this Screamer were brought home, taken between September 11th and October 13th, 1909, at Ajó; five, rarely six, being the complete clutch; they are of a creamy white or pale bluish white, and measure: axis 3·2 to 3·72 in., diam. 2·11 to 2·27.

The nest-sites are in swamp and composed of reeds and hunco.

Fam. ANATIDÆ.

210. CHLOËPHAGA POLIOCEPHALA.

*Chloëphaga poliocephala* Salvad. Cat. B. xxvii. p. 137.

*Bernicla poliocephala* Arg. Orn. ii. p. 124.

This Goose is not represented in the collections made by me, but there is a male as well as a female in the collection of Miss Runnacles, taken on the 29th of June, 1909, at Los Ynglases, Ajó.

The female is adult and is moulting, except the wings and tail, the old feathers shewing much signs of wear.

The male is a young bird moulting, except for the wings and tail, into the adult dress. The old feathers on the chest and back are all the barred feathers of the young bird; the wing lacks the glossy speculum, and a few barred feathers remain on the breast.

The notes on this species are included in those on *C. rubidiceps*.

211. CHLOËPHAGA RUBIDICEPS.

*Chloëphaga rubidiceps* Scl. P. Z. S. 1860, p. 415, pl. clxxiii. a, b. ♂. Laguna de Milan, Ajó. May 16, 1909.

Irides dark brown; bill black; legs and toes dark yellow and black.

There are also two males in Miss Runnacles' collection, taken on the 29th of June in the same year; one of which is moulting very slightly on the body. Two of these four birds have the cinnamon colour of the abdomen extending to the breast, and the heads are rich and dark in colour; these I take to be fully adult birds. The other two have the cinnamon colour only on the abdomen, and the heads

are less rich and lighter in colour; these I take to be younger birds, though they have the speculum on the wing as in the adult specimens.

This Goose had not been seen in the Ajó district for many years until the winter of 1909. A good many made their appearance in the middle of May, and several hundreds had arrived before I left in the middle of June.

I was afterwards informed by Miss Runnacles "that in company with *Chloëphaga poliocephala* they came in their thousands and literally covered the camp, being most unwelcome visitors, as the drought had caused a scarcity of grass and these flocks of Geese helped to eat what was left; they began to thin out towards the end of July, and by the middle of August hardly one remained."

This Goose is locally known as the "Pato de la sierra" (Hill duck). Strange or rare birds in that district are always said to be visitors from the sierras.

#### 212. *CYGNUS NIGRICOLLIS.*

*Cygnus nigricollis* Arg. Orn. ii. p. 124.

*Cygnus melancoryphus* Salvad. Cat. B. xxvii. p. 39.

a. ♀ ad. Los Ynglases, Ajó. Nov. 10, 1908.

Irides deep brown; bill dark slate-coloured, cere and lores deep red; legs and toes livid flesh-coloured.

This Swan is common in the Ajó district, and is found in small parties throughout the winter months. Owing to the dry seasons experienced, I did not find any nests, and although I examined every lagoon for them no young birds were observed.

#### 213. *COSCOROBA CANDIDA.*

*Coscoroba candida* Arg. Orn. ii. p. 126.

*Coscoroba coscoroba* Salvad. Cat. B. xxvii. p. 42.

a, b. ♀ ad. Laguna de Milan, Ajó. Nov. 15, 1908.

c. ♀ ad. Los Ynglases, Ajó. April 13, 1909.

Irides white; bill, legs and toes pink-flesh-coloured.

Both the November birds have dropped all the primaries and new ones are developing. The April bird has almost completed the moult.

This is a very common species in the Ajó district and frequents all the open waters and the sea-coast.

In November 1908, on the Laguna de Milan, many of these birds were seen unable to fly, and on being chased half swam and half flopped over the surface of the water to take refuge in the dense reed-beds.

214. *DENDROCYGNA FULVA.*

*Dendrocygna fulva* Arg. Orn. ii. p. 126 ; Salvad. Cat. B. xxvii. p. 149.

a. ♂ ad. Villa Pilar, Paraguay.

Irides brown ; bill slate-coloured, darker at tip ; legs and toes slate-coloured.

215. *CAIRINA MOSCHATA.*

*Cairina moschata* Arg. Orn. ii. p. 129 ; Salvad. Cat. B. xxvii. p. 51.

a, b. ♀ imm. & ad. Pan de Azucar, Brazil. Sept. 18-19, 1909.

Commonly observed in Northern Paraguay and Brazil, especially near Puerto Maria, in flocks of upwards of forty individuals.

216. *HETERONETTA ATRICAPILLA.*

*Heteronetta melanocephala* Arg. Orn. ii. p. 130.

*Heteronella atricapilla* Salvad. Cat. B. xxvii. p. 325.

a, b. ♂ ♀ ad. Los Ynglases, Ajó. Oct. 3, 1908.

c. ♀ ad. " " Oct. 27, 1908.

This is by no means a common Duck in the Ajó district : it frequents singly or in pairs open sheets of water in the larger reed-beds ; it swims rather low in the water and reluctantly takes to flight.

217. *QUERQUEDULA CYANOPTERA.*

*Querquedula cyanoptera* Arg. Orn. ii. p. 130 ; Salvad. Cat. B. xxvii. p. 303.

a, b. ♂ ♀. Los Ynglases, Ajó. May 9, 1909.

♂. Irides pale yellow ; bill black ; legs and toes pale yellow.

♀. Irides brown ; bill black faintly mottled with grey, lower mandible mottled with pale flesh-colour ; legs and toes pale brown.

## 218. QUERQUEDULA FLAVIROSTRIS.

*Querquedula flavirostris* Arg. Orn. ii. p. 131.

*Nettion flavirostre* Salvad. Cat. B. xxvii. p. 261.

a, b. ♂ ad. Los Ynglases, Ajó. Sept. 18-22, 1908.

c. ♂ nestling. „ „ Oct. 7, 1908.

d. ♂ ad. „ „ Mar. 8, 1908.

Irides dark brown; bill clear yellow, culmen and tip black; legs and toes brownish white.

One of the September birds and the March one are moulting slightly on the body; the latter shews signs of wear, and many of the belly-feathers have faded to brown at the tips.

This is the Tree-Teal of the Ajó district, where it is quite plentiful and very tame and confiding, many being seen perched on the eucalyptus trees close to the buildings. There also it breeds, placing the nest on the top of those of *Bolborhynchus monachus*, and laying five or six eggs. It probably carries the young down after hatching, although I have been unable to detect it in the act, but I have more than once seen the whole brood following the parent, who will often affect lameness or other injury to entice the intruder away. Its habit here of breeding in trees does not appear to have been recorded in other localities, and Hudson, in 'Argentine Ornithology,' mentions it as breeding on the ground. The call is a harsh scraping quack, continually repeated when on the wing; the flight being very swift and twisting when threading its way through trees. The bird seems perfectly at home on the branches of the trees, where, when not on the water, I have always seen it resting.

I did not obtain the eggs, owing to the inaccessible positions of most of the Parrots' nests, but there is a clutch of six in the collection of Miss Runnacles; these are of a pale cream-colour and slightly glossed, and measure:—axis 1·88 to 2·11 in., diam. 1·4 to 1·5. The nest was lined with down, and this one was placed on a Parrot's nest in a small tala tree.

## 219. QUERQUEDULA VERSICOLOR.

*Querquedula versicolor* Arg. Orn. ii. p. 131; Salvad. Cat. B. xxvii. p. 291.

a. ♂ ad. Los Ynglases, Ajó. Sept. 20, 1908.

b. ♂ ad. „ „ Jan. 27, 1909.

c, d. ♂ & ♀ ad. „ „ Mar. 8-30, 1909.

Irides dark brown; bill, upper mandible yellow at base, apical half and cutting-edge electric blue, culmen and tip black; lower mandible electric blue, nail black, soft skin blackish; legs and toes ashy.

The March female is much worn and starting to moult; the male, on the other hand, is in perfect plumage.

## 220. QUERQUEDULA BRASILIENSIS.

*Querquedula brasiliensis* Arg. Orn. ii. p. 133.

*Nettion brasiliense* Salvad. Cat. B. xxvii. p. 266.

a, b. ♂ ♀ ad. Medano, Paraguay. Sept. 17, 1909.

♂. Irides brown; bill dull dark crimson-red; legs and toes rich tomato-red.

♀. Irides brown; bill dark olive-brown; legs and toes not nearly so bright as in male.

This Duck was commonly observed throughout Paraguay and Brazil, usually in pairs; it has a low swift flight with the wings depressed, and looks exceedingly pretty as the sunlight catches the glossy wings.

## 221. DAFILA SPINICAUDA.

*Dafila spinicauda* Arg. Orn. ii. p. 134; Salvad. Cat. B. xxvii. p. 279.

a, b. ♂ & ♀ yg. Cape San Antonio. Dec. 21, 1908.

c, d. ♂ ♀ ad. & yg. Los Ynglases, Ajó. April 6, 1909.

e. ♀ ad. Los Ynglases, Ajó. April 13, 1909.

In the pair of adults before me I can see no difference in general, including the top of the head, except that the female has the wing-speculum dull bronzy brown mottled with brown.

Irides dark brown; bill black and greenish yellow, brightest near gape; legs and toes olive-grey.

The only difference between the pair of young shot in December lies in the male having a considerably darker speculum; both are moulting on the back. The young female taken in April is moulting all over, except for the wings, and has already assumed the rufescent head, breast, and back feathers of the adult; the speculum is pale brown, blackish where it adjoins the light tips and on the inner webs.

This is perhaps the commonest Duck on the pampas of the Ajó district; at the time that the thistle-seed is ripe (January to April) enormous flocks visit the open camps, resting by day on the lagunas, where excellent shooting can be obtained at the regular morning and evening flights.

It breeds in the district, placing the nest under any convenient tuft of grass, thistle, &c., in the open camp; the structure is lined with down and six to nine eggs are laid. The bird sits closely, and usually only rises when one's horse almost steps on the nest.

Thirteen eggs were brought home, collected on Oct. 22nd, 1909, at Ajó. They measure: axis 2·0 to 3·3 in., diam. 1·41 to 1·55.

222. *DAFILA BAHAMENSIS.*

*Dafila bahamensis* Arg. Orn. ii. p. 135.

*Pacilonetta bahamensis* Salvad. Cat. B. xxvii. p. 282.

a. ♂ ad. Luiconia, Ajó. Feb. 23, 1909.

Irides crimson; bill black, slaty at tip, basal patch red; legs and toes ash-coloured.

223. *MARECA SIBILATRIX.*

*Mareca sibilatrix* Arg. Orn. ii. p. 135; Salvad. Cat. B. xxvii. p. 236.

a, b. ♂ ♀ ad. Los Ynglases, Ajó. Sept. 15-23, 1908.

c. ♂ ad. „ „ Jan. 19, 1910.

Irides dark brown; bill, upper mandible blue slate-coloured, tip next to feathers and lower mandible black; legs and toes blue-grey.

The January bird is shewing considerable signs of wear and is beginning to moult.



## 224. SPATULA PLATALEA.

*Spatula platalea* Arg. Orn. ii. p. 136 ; Salvad. Cat. B. xxvii. p. 316.

a. ♂ ad. Laguna de Milan, Ajó. Nov. 15, 1908.

b. ♂ ad. Los Ynglases, Ajó. Apr. 6, 1908.

c. ♂ ad. Colonia Mihanovitch, N. Argentine. Aug. 13, 1909.

Irides white ; bill black ; legs and toes ochre-yellow, with black spots on some of the joints.

The November bird is in perfect plumage and the August example is shewing signs of considerable wear. The April bird is in almost full plumage, still moulting on the body ; the old feathers shewing no signs of eclipse plumage.

## 225. METOPIANA PEPOSACA.

*Metopiana peposaca* Arg. Orn. ii. p. 137 ; Salvad. Cat. B. xxvii. p. 332.

a, b. ♂ ♀ ad. Los Ynglases, Ajó. Sept. 22, 1908.

c, d. ♂ ♀ ad. „ „ Dec. 20, 1908.

♂. Irides rich orange ; bill lilac, tip black, knob pale tomato-red shading into the lilac, point of gape black ; legs and toes palish yellow-ochre.

♀. Irides dark brown ; bill blue-slate-coloured, tip black ; legs and toes pale clear brown.

This is the most uncertain of all Ducks in the Ajó district, considerable numbers being often seen where for weeks hardly one can be flushed. It has a strong flight and is always rather wary, and has a loud hoarse "quack." It breeds here, but I have only taken two sets of eggs, and both of these were in the nests of *Fulica* and contained the eggs of that bird also ; the natives say this is the usual custom of the bird, and assert that the Coot brings off the young.

Sixteen eggs were brought home, and these measure : axis 2·29 to 2·5 mm., diam. 1·72 to 1·75.

## 226. ERISMATURA VITTATA.

*Erismatura ferruginea* Arg. Orn. ii. p. 138.

*Erismatura vittata* Salvad. Cat. B. xxvii. p. 450.

*a, b.* ♀ ad. Los Ynglases, Ajó. Oct. 3, 1908.

Irides dark brown; bill dark olive-brown, lower mandible marked with yellow; legs and toes dark ash-coloured.

Both specimens are moulting on the body and tail.

This Duck is not commonly observed in the Ajó district, where it frequents the open water surrounded by reeds. On being alarmed it dives after the manner of a Grebe, and I have never seen it take to the wing.

When swimming, the tail is held upright and the body lies very low in the water, which almost closes over the shoulders.

[To be continued.]

X.—*On recently described Paradiseidæ, with Notes on some other new Species.* By WALTER ROTHSCHILD, Ph.D., M.B.O.U.

(Plates V. & VI.)

SINCE the appearance in 1898 of my "*Paradiseidæ*" in 'Das Tierreich,' there have been described sixteen new species and subspecies of Birds of Paradise; of these one, in my opinion, is a hybrid, which would thus leave fifteen new species and subspecies.

This continual stream of new forms of *Paradiseidæ* shews that we have very little final knowledge of the avifauna of huge tracts of that wonderful island New Guinea.

Before the publication of my "*Paradiseidæ*" we knew the eggs of only sixteen Birds of Paradise, viz., *Ptilonorhynchus violaceus* (1889), *Ælurædus melanotis maculosus* (1895), *Æ. viridis* (1889), *Chlamydera maculata* (1889), *C. nuchalis orientalis* (1897), *C. cerviniventris* (1895), *Sericulus chrysocephalus* (1889), *Ptilorhis paradisea paradisea* (1897), *P. p. victoriæ* (1890), *P. magnifica alberti* (1897), *Paradisea apoda apoda* (1884), *P. a. augustæ-victoriæ* (1897), *P. a. raggiana* (1883), *Manucodia atra atra* (1897), *M. a. altera* (1897), and *M. comrii* (1893).

The following is a list of species and subspecies of which we now know the eggs; those marked with an \* are in the